Application No. 09/678,783
October 31, 2005
Reply to office action of August 22, 2005

Amendments to the Claims

Please amend the claims as follows:

1. (Previously Amended): A method of determining a routing for packets in a network of network objects, said method comprising:

a) dividing said network into LAN (Local Area Network) segments of non-routing objects, and WAN (Wide Area Network) segments of routing objects;

b) determining connections between non-routing objects, and between routing objects;

c) determining a routing for packets through each segment based on connections determined in step b);

d) combining said routing determined for each segment in step c) to obtain a total routing through the network.

2. (Cancelled):

3. (Previously Amended): A method as in claim 1 further including partitioning non-router network objects into discrete LAN segments, each LAN segment being a collection of connected non-router network objects separated from other non-router network objects by at least one router.

4. (Previously Amended): A method as in claim 1 including partitioning routers into WAN segments, each WAN segment being a collection of connected routers separated from other routers by at least one non-router network object.

5. (Previously Amended): A method as in claim 4 wherein step c) includes determining for each WAN segment a sequence of routers a packet passes through from a source router to a destination router in the WAN segment.

6. (Previously Amended): A method as in claim 3 wherein step c) includes determining for each segment which non-router network objects a packet passes through from a source non-router network object to a destination non-router network object in the LAN segment.

7. (Previously Amended): A method as in claim 1 wherein step c) is executed from a plurality of beacons located at different points in the network.

8. (Previously Amended): A method as in claim 6 wherein step c) includes reading a table of source addresses at each non-router network object in each LAN segment, said table containing source addresses of packets which transit through said non-router network object.

9. (Previously Amended): A method as in claim 3 wherein step c) is accomplished using a previously determined topology of the network.

10. (Original): A method as in claim 5 wherein the sequence of routers a packet passes through is determined from a plurality of beacons located at different points in the WAN segment.

11. (Original): A method of determining a packet's routing through a LAN segment composed of multiple network objects, said method comprising:

a) determining a network address of a source network object;

b) determining a network address of a destination network object;

c) determining which network objects receive packets from the source network object;

d) determining connections between network objects using the topology of the LAN segment; and

e) determining which network objects are in a route from the source network object to the destination network objects based on data obtained in steps c) and d).

12. (Currently Amended): A method of determining the performance of a route in a network, the method comprising:

a) determining a source network object;

b) determining a destination network object;

c) determining a route through the network from the source network object to the destination network object;

d) measuring the network performance of each network object on the route; and

e) aggregating the network performances obtained in step d) to obtain a total network performance for the route,

wherein said network performance is that of a network element's drop rate of packets and said total network performance is the end to end transmission fraction over a path,

wherein said end to end transmission fraction over a path is determined according to

$$T = \prod_{i=1..N} (1 - D(i))$$

where

T = end to end transmission fraction over a path from object 1-N

D(i) = drop rate of device i.

13. (Original): A method as in claim 12 wherein said network performance is that of a packet's delay through said network element and said total network performance for the route is the total end to end delay for a packet traversing said route.

14. (Cancelled): ~~A method as in claim 12 wherein said network performance is that of a network element's drop rate of packets and said total network performance is the end to end transmission fraction over a path.~~

15. (Cancelled): ~~A method as in claim 14 wherein said end to end transmission fraction over a path is determined according to~~

$$T = \prod_{i=1}^{N} (1 - D(i))$$

~~where~~

~~T = end to end transmission fraction over a path from object 1 N~~

~~D(i) = drop rate of device i.~~

16. (Original): A method as in claim 12 wherein said network performance is a network element's throughput and said total network performance is a determination of bottlenecks in said path.

17. (Previously Amended): A method as in claim 1, further including steps:

a) measuring a network performance of each segment on said routing; and

b) aggregating said network performances obtained in step a) to obtain a total network performance for said total routing.